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Book Reviews

WILHELM MAGNUS, *Collected Papers*, Springer, 1984, 726 pp.

E. B. DYNKIN, *Markov Processes and Related Problems of Analysis* (*Selected Papers*), Cambridge, Univ. Press, 1982, 312 pp.

J. E. LITTLEWOOD, *Collected Papers*, 2 vols., Oxford Univ. Press, 1982.

HARISH-CHANDRA, *Collected Papers*, 4 vols., Springer, 1982.

A. BOREL, *Collected Papers*, 3 vols., Springer, 1983.

E. NOETHER, *Gessammelte Abhandlungen*, Springer, 1983.

B. L. VAN DER WAERDEN, *Zur algebraischen Geometrie* (*Selected Papers*), Springer, 1983.

In our ahistorical age, it may seem a paradox, or an old fool's paradise, to state that the reading, or even the casual scanning, of sets of collected papers is more likely to enrich our current work than any feverish leafing through the latest periodicals, or any breathless running around from one conference to another. The masters had more varied ideas than are remembered in later accounts of their work.

Paradoxically again, the rapid advance of mathematics sifts the men from the boys faster than ever before. Mediocre mathematics falls by the wayside, like a fragile building in an air raid, and only the sturdy edifices remain. Lastly, the joust of fashion, now intensified like everything else, leads to the victorious comeback of ideas that some of us thought had been buried forever.

Looking at Emmy Noether's collected papers, for example, we are struck by the timeliness of some papers that our teachers had advised us to skip. Her elaboration of Hentzelt's thesis is once again the talk of the town. Her work on differential invariants is no less timely, now that we realize that the algebra of differentiation is no less important than the analysis. Her papers on classical invariant theory make up a good half of her published work, and even her thesis, written at Gordan's suggestion, bears careful scrutiny. It is rumored that the author had a low opinion of this work of hers. Will she turn in her grave when some nice young man rewrites it in the jargon of our day? The papers that made her name a household word at St. Algebra's are the least interesting; such are the wages of success.

At last van den Waerden has allowed the publisher to string together in book form the long series of papers on algebraic geometry that throughout his life he had been publishing in careful linear order. Now that we are toilet trained in commutative algebra, we can fancy ourselves as playing Heldentenor, and read them without sudden panics. Again, the more timely are the papers which only twenty-five years ago would have been poo-pooed, those on elimination theory, on the Schubert calculus and on special topics (we are again living an age of the special, which manages to survive specialization).

Harish-Chandra is a special case. With him, harmonic analysis has come of age, in a monument *aere perennius*. Pattern recognition? Image processing? Filtering through noise? Big words in the world of big bucks, problems clamoring for solution, and fast. The know-nothings of computer science will be surprised to learn, as we predict, that the solutions to

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